REMARKS

Claims 1-8 are pending in the instant application. Applicants have canceled Claims 9-18. WHEREIN, Claims 1-8 remains to be examined. No new matter has been added. No additional claims fee is believed to be due. Applicants reserve the right to prosecute the originally filed claims in the future.

103(a)

Examiner has rejected Claims 1-8 under 35 USC 103(a) as being upatentable over Bilodeau et al. (US 7,223,738), in view of King et al., and Weber et al. supplemented with Patani. The Examiner states that '738 discloses isosteric analogues of the instant claims. The Examiner further states that: 1) King et al. teaches that a thienyl ring system and a phenyl ring system are isosteric structures; 2) Webber et al. teaches that a quinolinyl and a thienopyridinyl ring system are isosteric because of the configurational similarity; and 3) Patani et al. describe that such isosteric modification of lead compounds is a design choice to medicinal chemists. Based on these references, the Examiner suggests that one of ordinary skill in the art would be aware of these references and would apply that knowledge to medicinal chemisty efforts. Specifically, the Examiner suggests that it would have been prima facie obvious to modify AKT inhibitor compounds having a quinolinyl ring with an isosteric replacement and generate AKT inhibitor compounds with similar activity.

Applicants respectfully disagree. Firstly, the lynchpin to this argument is based on the Patani reference (which "describe[s] that such isosteric modification of lead compounds is a design choice to medicinal chemists"). The Patani reference is not provided to the Applicant and Applicant respectfully requests a copy of this reference. Second, even without the Patani reference, the Examiner has not made the case for prima facie obviousness.

The King et al. reference briefly discusses isosteric replacement as a means for "rational" drug discovery. However, in Table 1, which depicts a benzene/thiophene ring equivalent, the title states "Table 1: Classical isosteres which may function as bioisosteres". It is not obvious, in light of this title, that a benzene/thiophene isostere would elicit the same or similar biological activity. Significantly, at the top of page 209, the author continues, "When considering any approach to lead optimization, alteration of one part of the molecule almost always affects more than just one property. Isosteric and bioisosteric replacements are no exception and this should always be considered when analysing the result of such replacements. For example a simple CH2 to O to S series of replacements can alter size, shape, electronic distribution, water or lipid solubility, pKa, metabolism, or hydrogen bonding capacity, all with unpredictable effects on biological activity." The King reference seems to suggest that isosteric replacement has

unpredictable effects on biological activity, which is in complete contrast to the Examiner's argument. The Examiner states on page 3 of the Official Action that "The modification of a proven compound with the design choice of isosteric replacement using well known functional equivalency of the ring system is prima facie obvious since such replacement modification is well recognized in the art to be useful in obtaining more compounds with similar activity". Applicants submit, based on the King et al. disclosure, that this is simply not the case.

The Webber et al. reference provides a chemical analysis of thienopyridine isomers and their isosteres but is silent on rational drug design and biological behavior.

Applicants respectfully contend that the Examiner has not made a case of prima facie obviousness and request allowance of Claims 1-8.

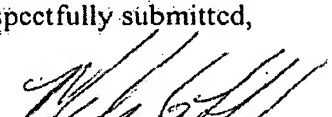
Nonstatutory Obviousness-type Double Patenting

Examiner has rejected Claims 1-8 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claims 1-9 of US Patent No. 7,399,764 in view of Claim 1-2 of US Patent No. 7,223,738. The Examiner states that although the conflicting claims are not identical, they are not patentably distinct from each other for the same rational of finding the described compounds prima facie obvious.

Applicant respectfully disagrees for the reasons stated above and requests allowance of Claims 1-8.

Applicants believe no additional fees are due but the Commissioner is authorized to charge any fees required in connection with this amendment to Merck Deposit Account No. 13-2755. If a telephonic communication with Applicant's representative will aid in the advancement of the prosecution of this application, please telephone the representative indicated below.

Respectfully submitted,

By: 

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